



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,191	04/18/2001	Tsung-Chih Chen	BHT-3106-135	6521
7590	07/22/2004			
Charles R. Sutton 201 South Lake Avenue Suite 302 Pasadena, CA 91101			EXAMINER JIANG, CHEN WEN	
			ART UNIT	PAPER NUMBER
			3744	
			DATE MAILED: 07/22/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,191

Applicant(s)

CHEN, TSUNG-CHIH

Examiner

Chen-Wen Jiang

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Phillips et al. (U.S. Patent Number 3,236,056).

Phillips et al. disclose an apparatus for cooling automobiles. Referring to Figs.1-3, the reference number 10 designates a heat exchanger provided with a cold chamber 12 and a hot chamber 14. Commercial thermoelectric units 34 (crystals are inherent in the thermoelectric units) are bonded between the cold and hot chambers. Pumps 30,52 are utilized to force the water through the chambers, cold and hot coils.

3. Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Attey et al. (U.S. Patent Number 5,544,487).

Attey et al. disclose a thermoelectric heat pump with hot and cold liquid heat exchange circuits. A thermoelectric system 10 comprises a thermoelectric module 12 having first and second opposed faces. When an electric current is applied to the module, heat is pumped from one side to the other side. A respective manifold 14 defining a volume is attached to each face of the thermoelectric module 12. One or other of the conduits 40,42 has mounted thereto a pump 44. The thermoelectric module 12 may be mounted at a mid-point in a refrigerator wall with the cooling side manifold 14, pump 44, conduits 40,42 and heat exchanger 46 inside of this point

and the heating side manifold 14, pump 44, conduits 40,42 and heat exchanger 46 outside of this point. Referring to Fig.2, heat exchanger 46 is surrounding by cooling fins 50.

4. Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Lopp et al. (U.S. Patent Number 2,928,253).

Lopp et al. disclose a thermoelectric apparatus for cooling and heating. Referring to Figs.1-4, the apparatus comprise Peltier couples 26,27,28 and 29, cold chamber 13, hot chamber 16, water or other liquid are circulated to provide hot or cold water or liquid. An air-cooled finned heat exchanger is also included in the circuit.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al. (U.S. Patent Number 3,236,056) in view of Saeki et al. (U.S. Patent Number 5,070,701).

Phillips et al. disclose the invention substantially as claimed. However, Phillips et al. do not disclose the thermoelectric element material include of Sb, Bi. Saeki et al. teach that Sb and Bi are used to make thermoelectric in the same field of endeavor for the purpose of providing thermoelectric element material. Saeki et al. do not disclose the cold and hot coils are irrelevant since these are disclosed by Phillips et al. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Phillips et al. with Sb and Bi material in view of Saeki et al. so as to make thermoelectric elements.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al. in view of Saeki et al. and further in view of Gilley et al. (U.S. Patent Number 6,003,319).

Phillips et al. disclose the invention substantially as claimed. However, Phillips et al. do not disclose fins are attached to the hot chamber and adapted to a fan. Saeki et al. teach that fins are attached to a chamber as shown in Fig.2(a) and Gilley et al. teach a fan to drive air through the fins for cooling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Phillips et al. with fins and fan in view of Saeki et al. and further in view of Gilley et al. so as to improve the cooling. Regard to the three sides are integrated to the fins are design choice based on the heat transfer requirement.

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lopp et al. or Phillips et al. in view of Saeki et al. (U.S. Patent Number 5,070,701).

Lopp et al. and Phillips et al. disclose the invention substantially as claimed. However, Lopp et al. and Phillips et al. do not disclose the fin is located at the outside of the hot conductor. Saeki et al. discloses fins 42 and conduits 40,41 in the same field of endeavor for the purpose of dissipating heat. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Lopp et al. and Phillips et al. with a fins on the outside of the hot conductor in view of Saeki et al. so as to improve heat dissipation. Regard to the three sides are integrated to the fins are design choice based on the heat transfer requirement.

9. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips et al./Lopp et al./Saeki et al. as applied to claims 1 and 4 above, and further in view of Applicant disclosed prior art Fig.1.

Phillips et al./Lopp et al./Saeki et al. disclose the invention substantially as claimed. However, Phillips et al./Lopp et al./Saeki et al. do not disclose blade fan and eccentric fan for hot/cold air. Applicant discloses prior art using blade fan and eccentric fan in the same field of endeavor for the purpose of delivering cold air. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Phillips et al./Lopp et al./Saeki et al. with blade fan and eccentric fan in view of disclosed prior art (Fig.1) so as to deliver hot/cold air.

10. In regard to claim 12, the addition of duplicate parts to the apparatus is not the type of innovation for a patent to be granted. *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8, 11 (7th Cir. 1977).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 3744

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275.

The examiner can normally be reached on Tuesday-Friday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, appearing to be 'C. Jiang', written over a horizontal line.